

**Apparatus and Methods For Constructing Antennas Using
Vias as Radiating Elements Formed in a Substrate**

Abstract of the Disclosure

Antennas are provided which are constructed using one
5 or more conductive via stubs as radiating elements formed in
a substrate. The antennas can be integrally packaged with
IC chips (e.g., IC transceivers, receivers, transmitters,
etc.) to build integrated wireless or RF (radio frequency)
communications systems.